

METHOD FOR IMPROVING ASH RATE UNIFORMITY IN
PHOTORESIST ASHING PROCESS EQUIPMENT

ABSTRACT

5 A method for improving the edge-to-center
photoresist ash rate uniformity in lower temperature
(typically, but not limited to $< 100^{\circ}\text{C}$) processing of
integrated circuits and micro-electro-mechanical devices.

10 A varying gap distance 32 from the edge-to-center of the
upper and lower grid plates, 30 and 31, of a plasma
ashing machine is provided to allow additional flow of
plasma gases into the normally semi-stagnated area near
the center of the wafer being processed. This

15 improvement overcomes the problem of slower photoresist
removal in the center of the wafer. Three configurations
of the invention is described, including both stepwise
and continuous variation of the grid plate gap spacing
and optionally, the variation of the size of grid plate

20 holes in a parallel grid plate assembly.